Iron Loading to Soda Butte Creek

Upstream of tailings impoundment
October 6,2008

Downstream of tailings impoundment
September 8, 2008

McLaren Tailings Abandoned Mine Reclamation Design

Cooke City, Montana

March 11, 2009

Pioneer Technical Services, Inc.

Butte, Montana

Design Objectives

- Prevent the releases of contaminated tailings and waste rock to the extent that they will not result in an unacceptable loading and risk to aquatic life in Soda Butte Creek and Miller Creeks.
- Prevent the releases of contaminated water from tailings and waste rock materials that would result in exceedances of the Montana State Water Quality Standards for surface water.

Design Objectives (cont.)

- Prevent the releases of contaminated water from tailings and waste rock that would result in exceedances of the Montana State Water Quality Standards for groundwater.

- Isolate tailings and waste rock materials to the extent that it will not result in an unacceptable risk to human health and/or aquatic life and environmental receptors.

Design Criteria

- Implement the McLaren Tailings Reclamation Project within the State of Montana property boundaries.
- Obtain the required cover soil and fill materials from within the State of Montana property boundaries.
- Implement the McLaren Tailings Reclamation Project with minimal impacts (during construction) to Soda Butte Creek, Miller Creek, and the adjacent community of Cooke City, Montana.

Design Criteria (cont.)

- Implement the McLaren Tailings Reclamation Project over a five year construction period.
- Design a groundwater dewatering system that will meet the discharge standards for Soda Butte Creek.
- Design and construct a repository that is of adequate size, stable for the seismic activities of the area, and protective of the underlying groundwater.

Design Criteria (cont.)

- Design and implement the McLaren Tailings Reclamation Project so it results in no long term environmental impacts to Soda Butte Creek and the adjacent community of Cooke City, Montana.

- Reconstruct Soda Butte and Miller Creeks to approximately their original channel alignments and configurations.

- Design and implement the McLaren Reclamation Project for short construction season periods (June 15 to October 31).

Design Criteria (cont.)

- Design and implement construction Best Management Practices (BMPs) during construction and winter shut down periods.
- Design long term BMPs for storm water run-on and run-off at the repository site.
- Revegetate the resulting upland and wetland footprints with grasses, forbes, shrubs, and trees that are native to the project area.

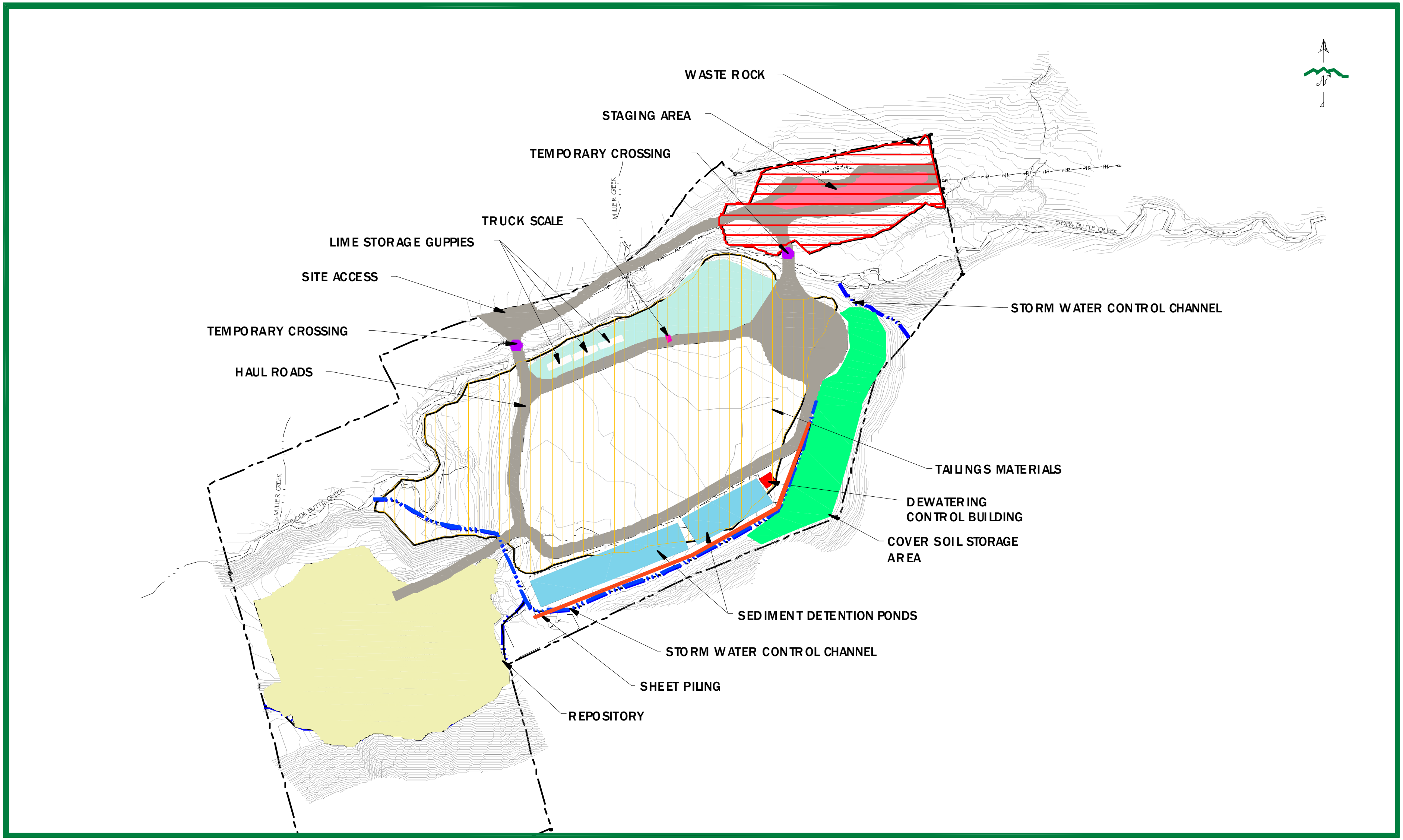
Reclamation Design Elements

- Site Facilities and Layout;
- Tailings Dewatering System Design;
- Repository Design;
- Excavation and Grading Design;
- Tailings Stabilization Design;
- Soda Butte Creek/Miller Creek Diversion/Isolation;
- Soda Butte Creek/Miller Creek Reconstruction;
- Revegetation Design;
- Best Management Practices Design; and
- Post Construction Monitoring.

Site Facilities

- Site Access Roads
- Soda Butte Creek Temporary Crossing
- Utilities (Electricity, Telephone)
- Truck Scales
- Staging Area (s)
- Lime Storage Area
- Cover Soil Storage Area
- Compost Storage Areas
- Tailings Stabilization Area
- Dewatering System
- Sediment Detention Ponds

Site Facilities Layout (Plan View)



Tailings Excavation and Grading Design

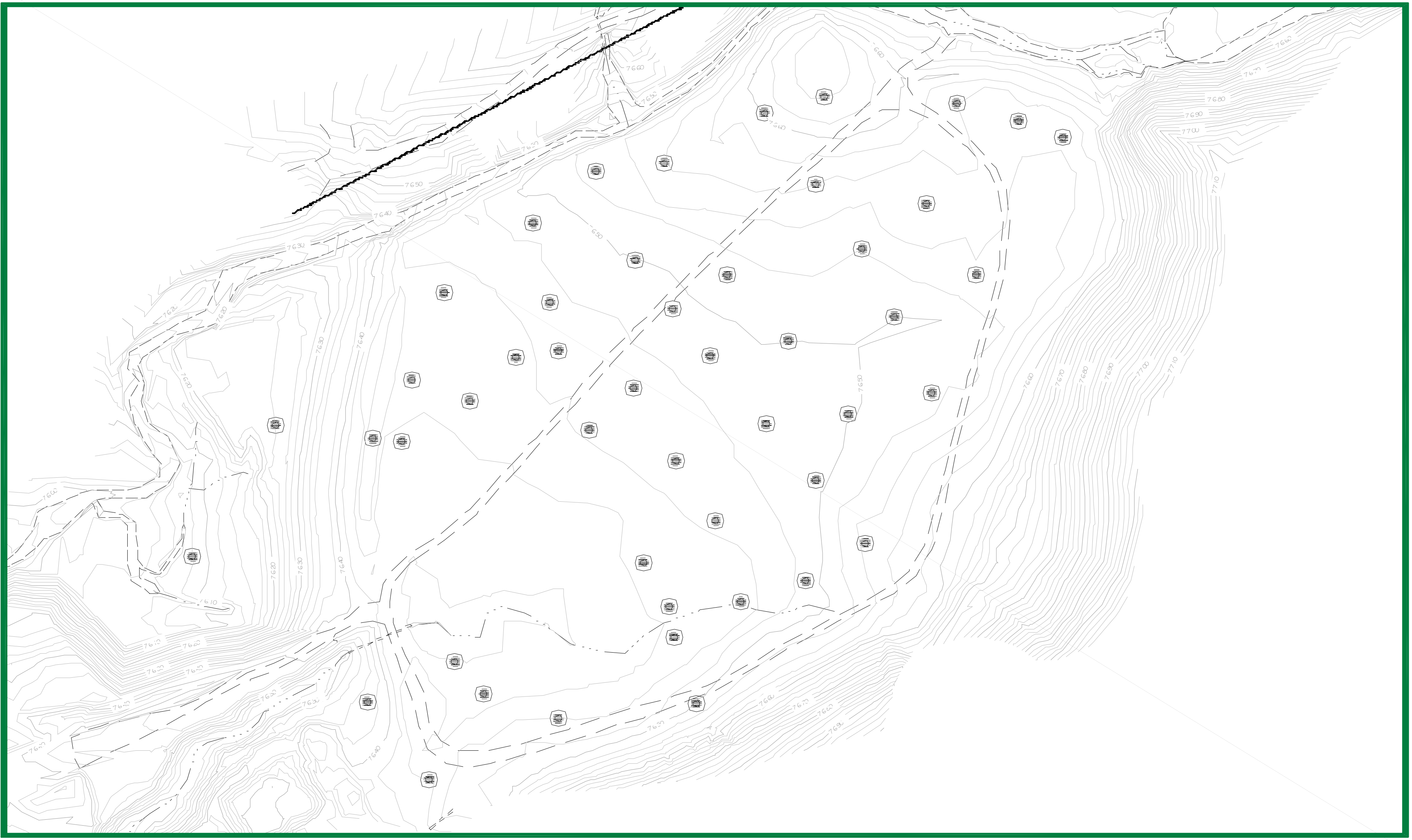
Tailings Area Investigation

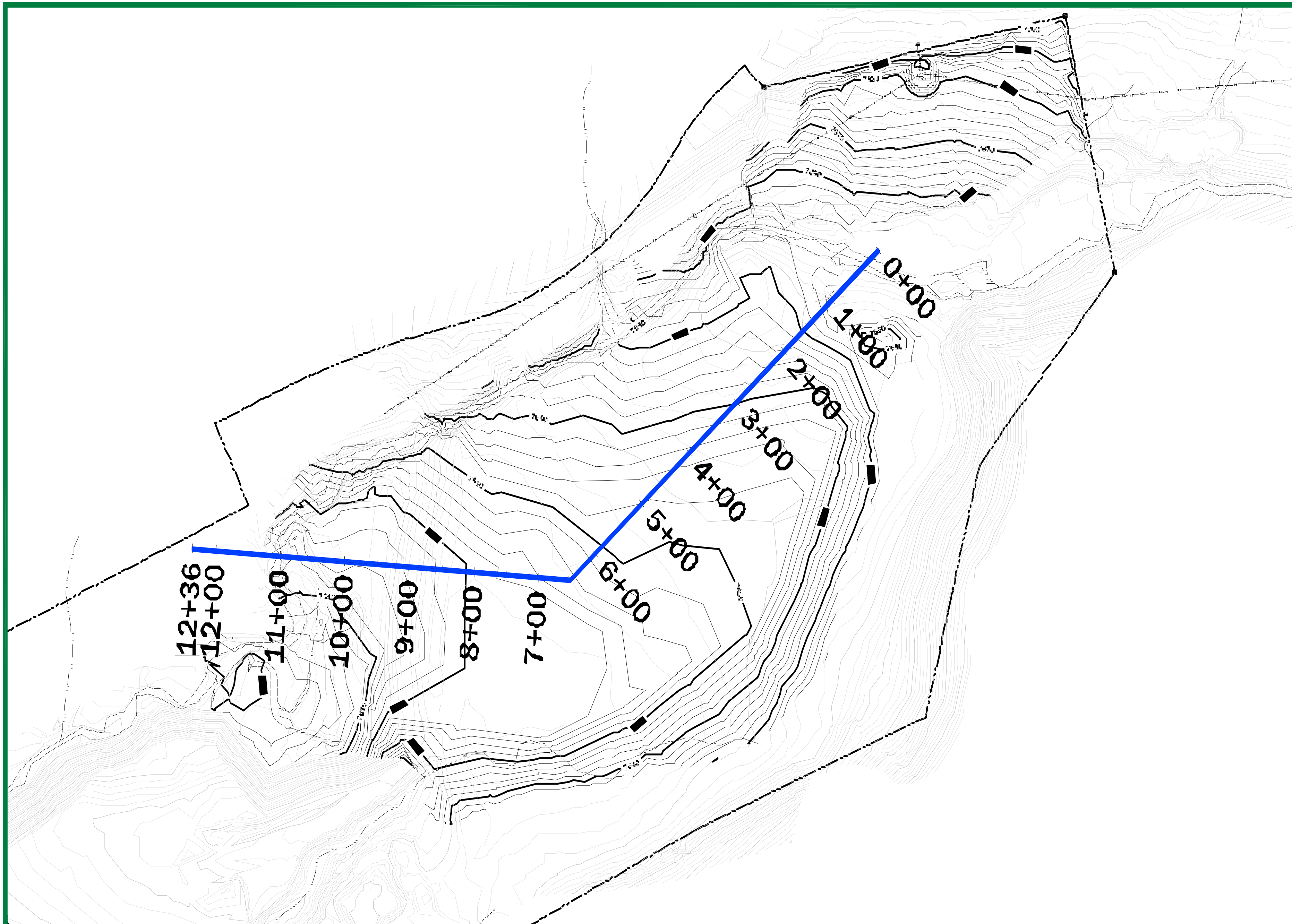
- Tailings - 47 Test Pits were completed in the tailings area measuring the depth of existing cover soil, depth to native soils and depth at which groundwater entered the test.

- Tailings test pits depths generally ranged from 9 to 23 feet in depth.

- All test pits were completed into native soils.

Tailings Test Pit locations





0+00
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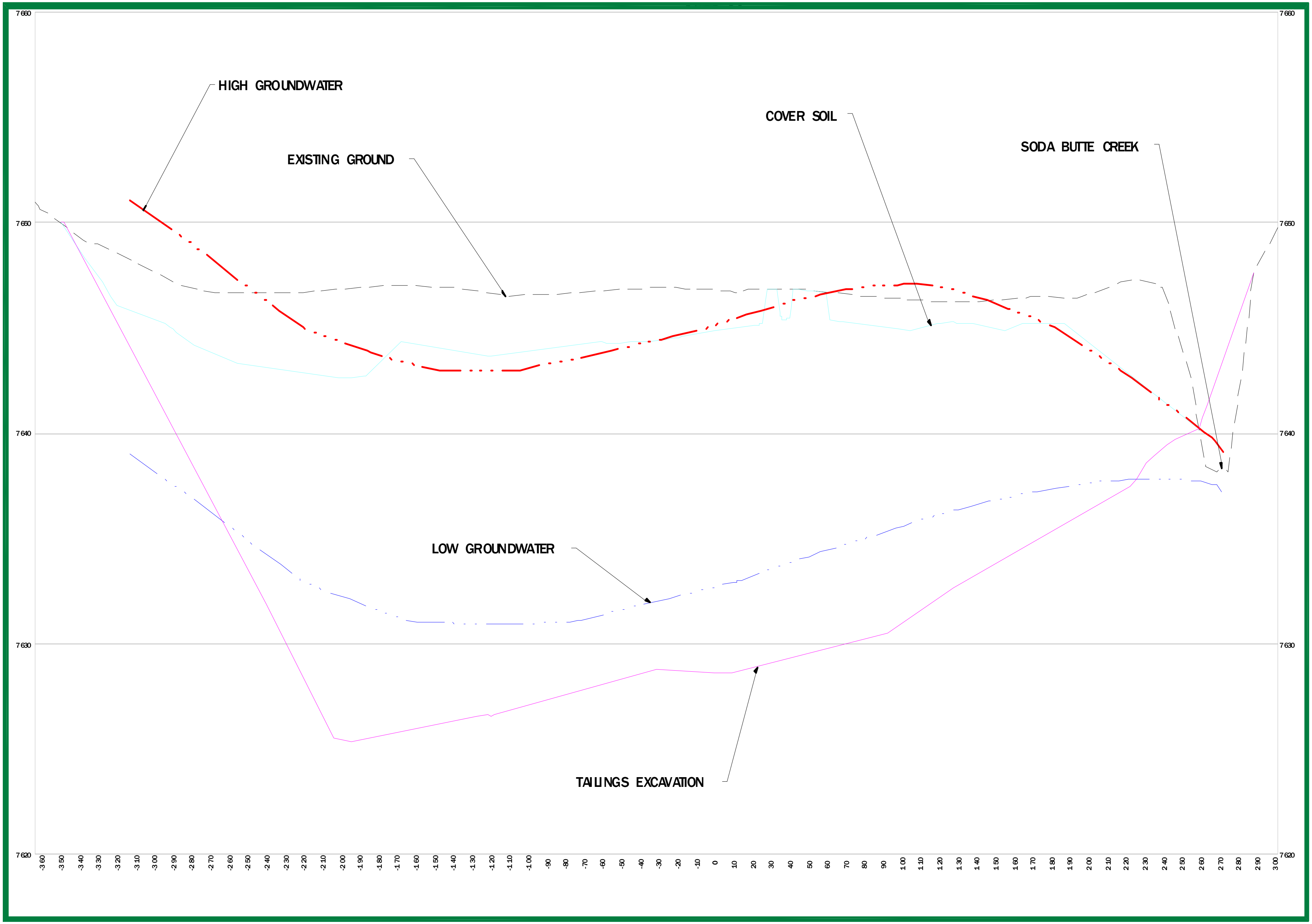
11+00
12+00
12+36


HIGH GROUNDWATER
EXISTING GROUND
COVER SOIL
SODA BUTTE CREEK
LOW GROUNDWATER
TAILINGS EXCAVATION
7660
7650
7640
7630
7620
-360 -350 -340 -330 -320 -310 -300 -290 -280 -270 -260 -250 -240 -230 -220 -210 -200 -190 -180 -170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300

Test Pit #12
(Total Depth 21 feet)

Test Pit #31
(Total Depth 18.5 feet)

Test Pit #37
(Total Depth 19 feet)

Test Pit #37 (Alluvium)

Tailings Volumes Notes

- Lime addition based in bank moisture content.
- Unsaturated = Less than 30% moisture.
- Saturated = greater than 30% moisture.
- Tailings expected swell = 1%
- Waste Rock, Alluvium, and other soils expected to swell = 15%.
- Alluvial volume assumes 1 foot will be removed after the tailings excavation.

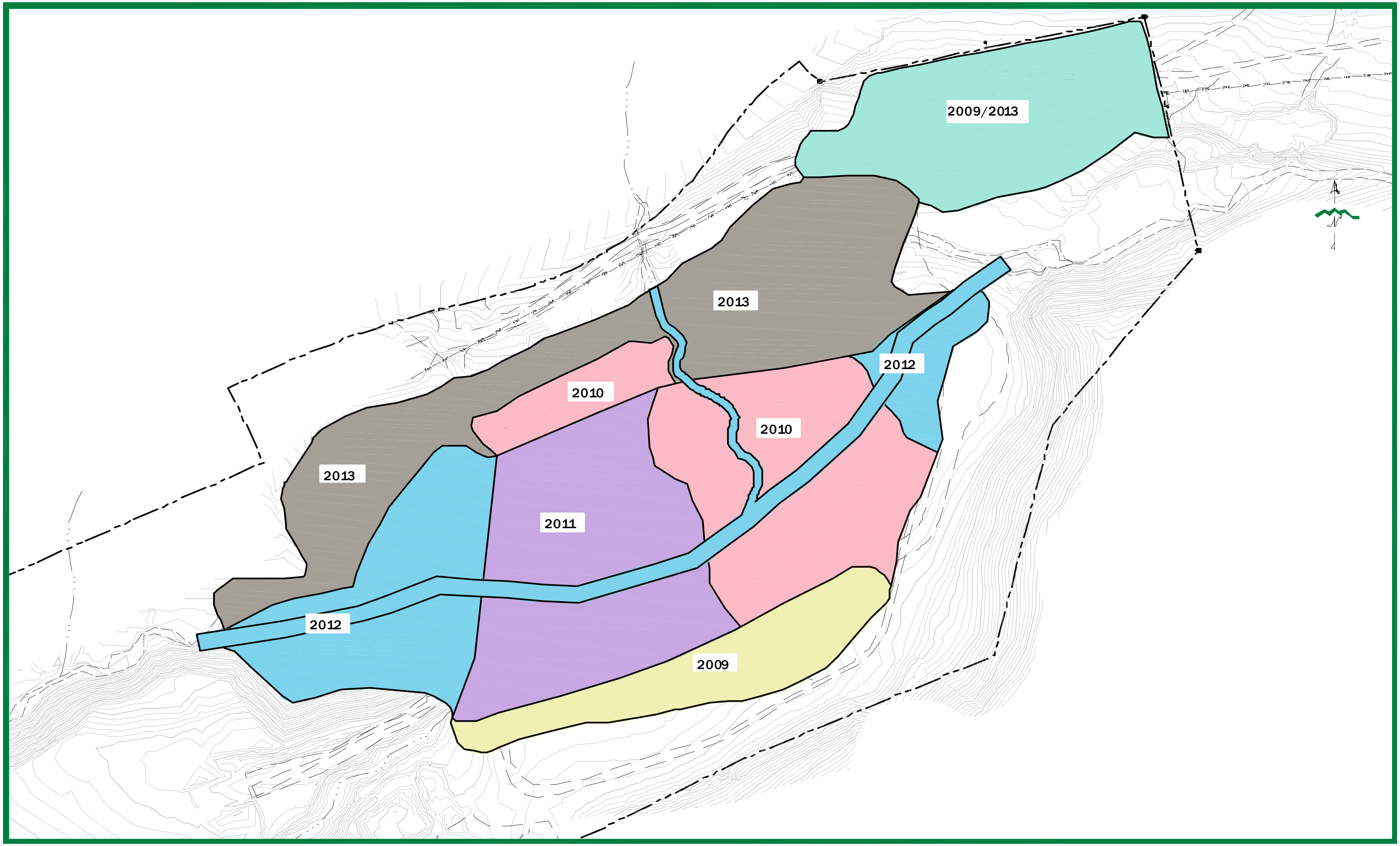
Waste Volumes

Material	Pre-lime CY	Required Lime %	Post lime CY	Repository CY (incl. swell)
Unsaturated Tailings	124,305	3	134,335	135,678
Saturated Tailings	35,872	5	40,789	41,197
Waste Rock	34,150	-	-	27,025
Alluvial Sediment	15,000	-	-	17,250
Embankment Materials	37,000	3	39,679	45,631
25 foot Buffer Materials	3,500	3	3,788	4,356
TOTAL	**249,827**	**-**	**-**	**283,385**

Existing Cover Soil Cap

- 47 excavated test pits.
- 35 bore holes completed with Geoprobe.
- Depth ranged from approximately 2-inches to 3.5 feet. Average depth was generally 1.5 to 2.0 feet.
- Existing cover soil is nutrient poor, with organic matter less than 1%.
- Total estimated salvage volume 32,500 cy.

Excavation Sequence



Dewatering System

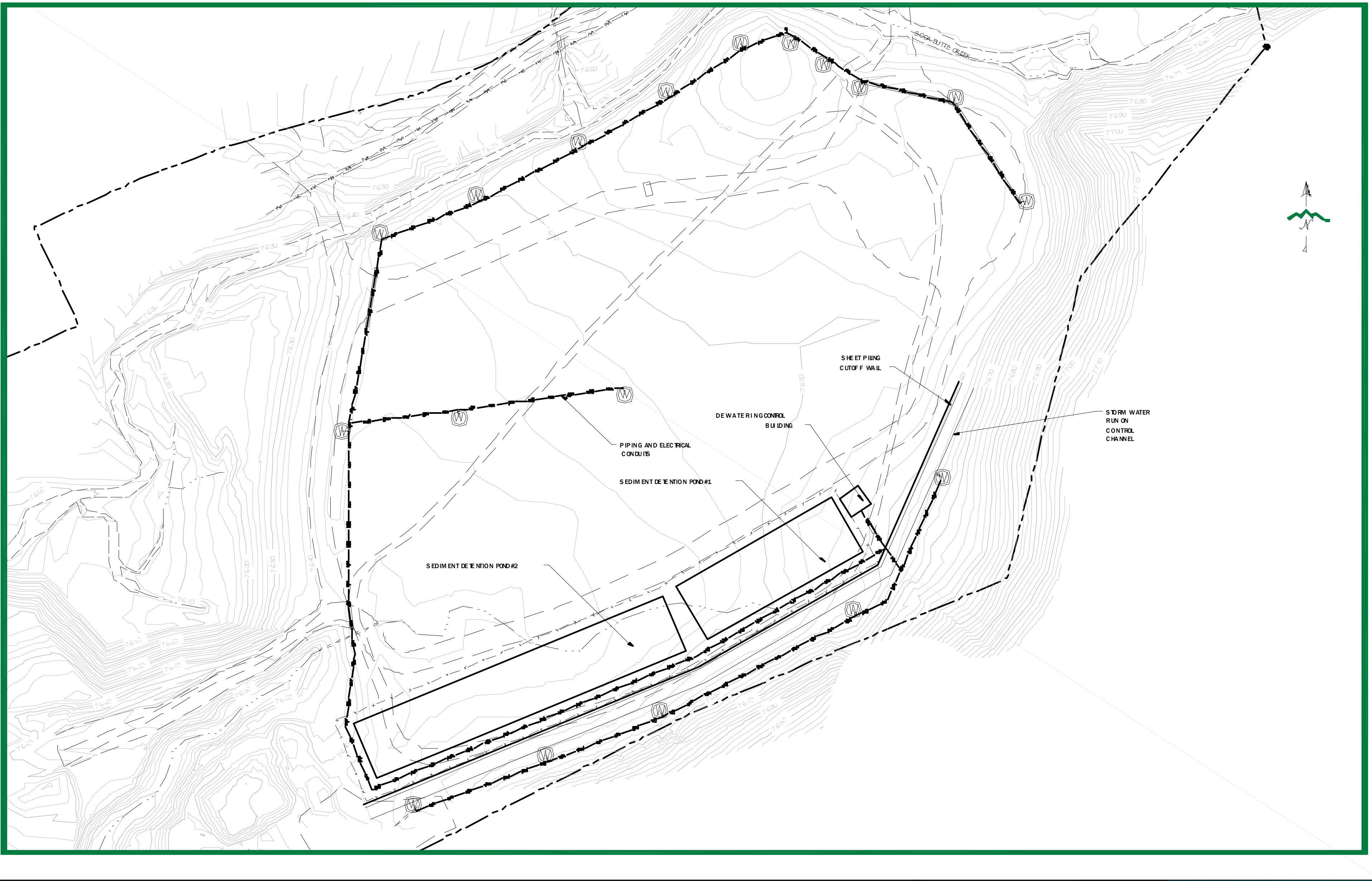
Construction Dewatering Design

- Why dewater?
  - Very poor materials stability (tailings and alluvium).
  - Estimated 36,000 cy saturated tailings during low-water conditions, more during high water.
  - Improve construction safety, efficiency, and feasibility.

Construction Dewatering Design

- What does the proposed dewatering system look like?
- Proposed Design Includes
  - 19 groundwater wells
    - 16 around the perimeter
    - 3 in the interior
  - One sheet-piling cutoff wall
  - One dewatering trench with sump

Dewatering System (Plan View)



Construction Dewatering Design

- Designed utilizing the following:
  - Data from 24-hour pumping test;
  - Groundwater Model; and
  - Historical data (MBMG, BoR, Parish, etc.).

Pumping Test

- Objectives:
  - Determine if alluvium underlying tailings could be utilized to dewater tailings.
  - Use collected data to build groundwater model and design Construction Dewatering System.
- Specifics
  - One pumping well, eleven piezometers.
    - Four shallow/deep piezometer pairs completed in tailings/alluvium.
    - Three additional piezometers.
  - 24-hour pumping period, varied from 5 gpm to 15 gpm.
  - 24-hour recovery.
  - Measurement of groundwater levels:
    - Continuous in pumping well and piezometers.
    - Periodic in outlying wells, seeps, and staff gages.

Pumping Test Results

- Aquifer characterized as “leaky-confined”
- Results show range of hydraulic conductivity (K) include:
  - In underlying alluvium, 25 to 125 feet per day (ft/day).
  - In tailings, 0.0045 ft/day.
- Drawdown curves from deep piezometers indicate anisotropic aquifer.
- Aerial response from minor pumping test covered significant portion of the McLaren Tailings Abandoned Mine Reclamation Project.
- Drawdown observed in shallow piezometers show tailings can be dewatered by pumping the alluvium.
- Results utilized in groundwater model.

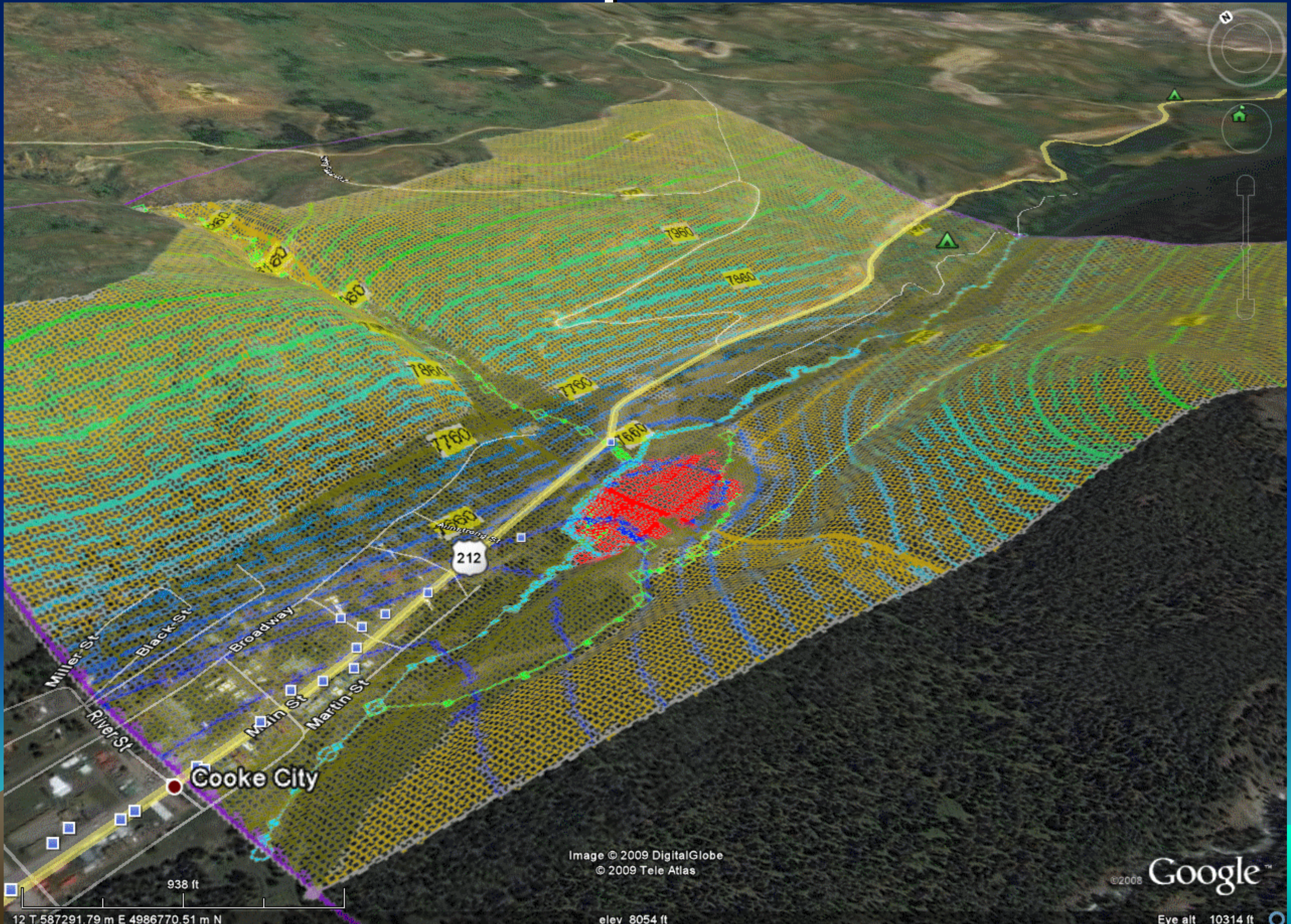
Groundwater Model-Overview

- Why model?
  - Evaluate different designs for effectiveness before they are constructed; and
  - Provide a better construction dewatering design to safely and efficiently dewater tailings.
- Software:
  - Model built with industry standard groundwater modeling software GMS® and MODFLOW 2000®.

Groundwater Model: Model Setup

- Objective: Utilize alluvium to dewater tailings.
- Three layer model
    - Layer 1 – tailings
    - Layer 2 – alluvium
    - Layer 3 – bedrock
- Includes:
    - Flux Boundaries, Drains and Streams
- Two versions constructed
    - Steady state; and
    - Transient.

Groundwater Model: Oblique View



Groundwater Model
Transient Model

- Why transient?
  - Simulate seasons and the passage of time.
  - Determine the length of time required for construction dewatering design to be effective.

Groundwater Model-Calibration

- Steady State Model calibrated with:
  - Groundwater elevations (head matching)
  - Pumping Test calibration

Model Results: Estimated Flows

- Utilized groundwater model to estimate average alluvial flow underneath McLaren Tailings
  - Estimated flow at 600 to 700 gallons per minute (gpm)
  - To design system, separated flow into six zones.
- Storage and high water conditions accommodated with additional 300 gpm pumping capacity for 900 to 1,000 gpm total estimated flow.
- An additional 500 gpm flow would be possible with current well and pond design (1,500 gpm total).

Groundwater Model: Evaluation of Design

- Design Evaluation utilized:
  - Considerations for Construction Dewatering Design;
  - Criteria for Efficiency, Cost-Effectiveness, and Feasibility; and
  - Evaluate Construction Dewatering Design within the Groundwater Model.

Groundwater Model: Design Considerations

- Limited materials stability in tailings and some alluvium
  - Required use of pumping wells instead of dewatering trenches
- Excessive alluvial depth
  - Eliminated use of cutoff wall in northeast portion.
- Minimize treatment volume
  - Effort to locate pumping wells around upgradient perimeter
- Winter conditions
  - Dewatering design more effective with year-round pumping
  - Design includes frost-free design considerations

Groundwater Model: Design Criteria

- Development of 14 Criteria to assess efficiency, cost-effectiveness, and feasibility.
- Criteria focus on:
  - Adaptability
    - Portions of system can be independently shut down
    - Ability to dewater localized tailings pockets
    - Accommodate point water sources (cutoff wall)
  - Consider any cost-effective substitutions
    - Cutoff wall vs. more wells
    - Well screen made from metal vs. PVC
  - System too reliant on singular component?
    - When something breaks, can the system continue operations?

Groundwater Model: Recommendations for Design

- Recommendations from model
  - For best effectiveness, dewatering should continue year-round.
  - Utilize upgradient wells to remove water before it flows underneath the tailings.
  - Focus tailings dewatering efforts on historic Soda Butte Creek channel.
    - Place large wells in center of tailings to dewater the tailings.

Construction Dewatering Design

- Why dewater year-round?
  - Spring surge occurs during construction startup.
  - To size dewatering system for spring surge and initial storage removal would double the size of the system.
  - Groundwater Modeling Results indicate more effective dewatering results.
  - Improve efficiency for short construction season.

Construction Dewatering Design
(cont'd)

- Why use wells?
  - Limited materials stability in tailings and portions of the alluvium limit use of dewatering trenches.
- Why use a cutoff wall on the side of the valley?
  - Significant valley sidewall flow observed from south hillside likely not effectively captured by shallow alluvial wells.
- Why not put all the wells in the middle?
  - Locating pumping wells around upgradient perimeter significantly minimizes treatment volume.

Dewatering System (Plan View)

Water Treatment Components

- Passive Treatment Systems
  - Lined Sediment Detention Ponds
  - Gunderbooms
  - Passive Aeration
- Chemical Treatment Systems
  - pH adjustment
  - Flocculant addition

Pumping Test Water Quality Data

September 29, and October 2, 2008

- Aluminum:
  - Total: 0.04 mg/L
  - Dissolved: ND
- Copper:
  - Total: 0.04 to 0.05 mg/L
  - Dissolved: ND
- Iron:
  - Total: 1.88 to 2.12 mg/L
  - Dissolved: 0.35 to 0.38 mg/L

Manganese:

- Total: 1.88 to 2 mg/L
- Dissolved: 1.91 to 2 mg/L

Pumping Test Water Quality Data
September 29, and October 2, 2008 (cont.)

- None Detect Elements: Antimony, Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel, Silver, and Zinc.

- Harness as $CaCO_3$: 368 to 375 mg/L
- pH: 7.5 to 7.7 standard units
- Total Suspended Solids (TSS): 10 to 19 mg/L
- Total Dissolved Solids (TDS): 416 to 424 mg/L

Passive Treatment Components

- Sediment Detention Pond #1 designed for 800 gpm and Sediment Detention Pond # 2 designed for 1,500 gpm.
- Sediment Detention Ponds designed to settle particle size of 8µm with settling velocity of 0.00019 ft/sec.
- Sediment Detention Ponds designed with 8 hour detention time.

Passive Treatment Components (cont.)

- Sediment Detention Ponds designed with Gunderboom capable of filtering 10 micron particle size.
- Aeration will be achieved using inlet and outlet structures.
- Estimated sludge accumulation is 2-inches over entire pond or 7-inches within the first 100 feet per year.

Chemical Treatment

- Monitoring pH of waters at four locations within system.
- Adjust pH of waters to 7.0 using NaOH before discharging to sediment detention ponds.
- Add flocculent to dewatering system waters to increase settling velocities.

Discharge Monitoring

- Monitor and document pH on daily basis.
- Sample Sediment Detention Pond # 2 discharge weekly and analyze for alkalinity; pH; sulfate; TDS; TSS; hardness; and the following total metals: arsenic, cadmium, copper, iron, lead, manganese, sodium, and zinc.
- During winter shutdown discharge will be sampled monthly.

McLaren Repository Design

McLaren Repository

- Design Objectives:

- Provide overall stable conditions.
- Provide for maximum capacity.
- Provide sufficient quantity of soil for cap construction as well as general reclamation.
- Maintain vertical separation from groundwater.
- Design repository cap and run-on controls to limit infiltration.

Provide Overall Stable Conditions

- Steep slope situated between Soda Butte Creek and repository location is a concern (up to 41 degrees).
- SW Montana is within a “Seismic Impact Zone”.
- Perform seismic evaluation of natural ground surrounding repository (as well as repository).
- Design seismic event - determined in accordance with standard engineering practice per USGS.

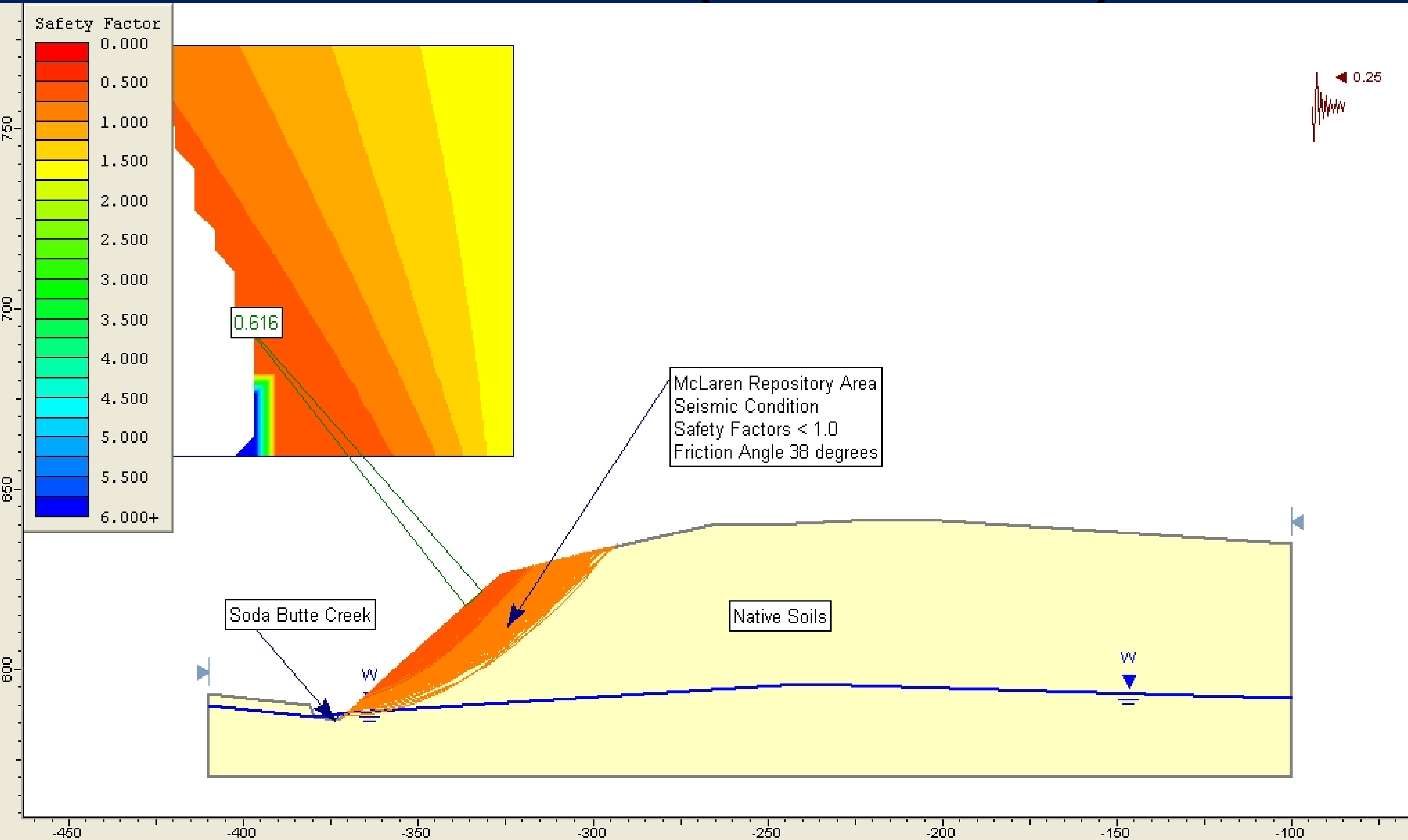
Provide Overall Stable Conditions (cont.)

- Design earthquake for McLaren Site = 0.25g peak horizontal acceleration.
- Statistically - 10% probability of earthquake of 0.25g magnitude occurring in any 250 year interval.
- Statistically - earthquake of 0.25g magnitude estimated to occur once every 2,500 years.
- SLIDE Model – Design earthquake results in failure of slope located between repository and Soda Butte Creek.

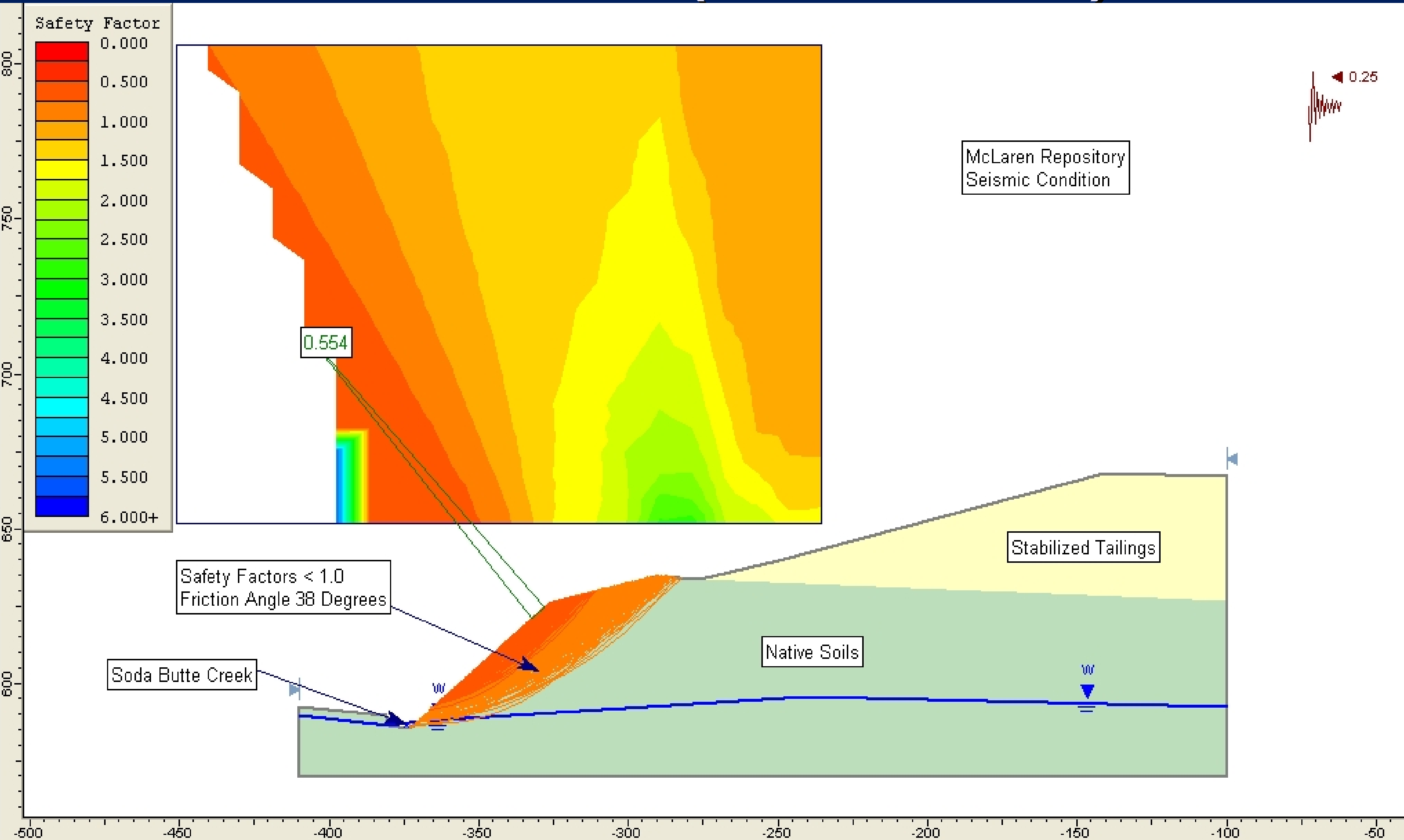
Provide Overall Stable Conditions (cont.)

- SLIDE Model – predicts that steep slope would break back (land slide) toward repository location approx. 30’.
- Perspective - Design earthquake event may result in landslides and considerable damage to Cooke City and related infrastructure (buildings, highways, power lines, etc.).
- SLIDE Model – predicts that additional load provided by wastes in repository contributes minimal additional instability to natural steep slope under seismic conditions.

Circular Failure Path under Seismic Conditions (SF = 0.616)



Circular Failure Path under Seismic Conditions (SF = 0.554)



Provide Overall Stable Conditions (cont.)

- Design repository to account for seismic instability (repository design constraints):

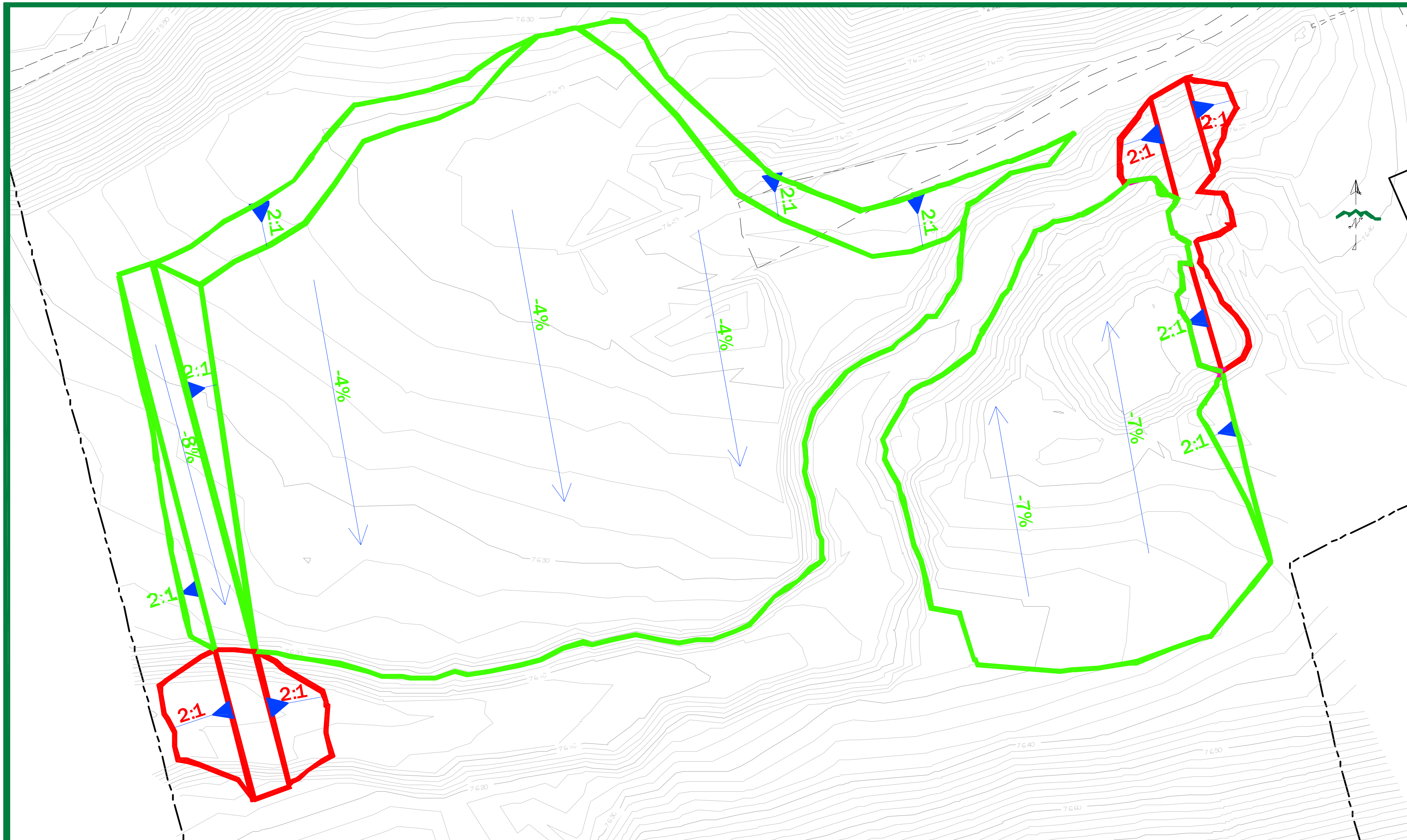
  a. Offset north edge of repository from steep slope by 50’; and

  b. Limit repository side slopes to maximum steepness of 5H:1V (for cap stability under design seismic event).

Provide Maximum Capacity

- Total quantity of waste on-site = 283,385 cy (incl. lime for dehydration).
- Maximum capacity of repository = 198,000 cy.
- Net quantity of tailings required to be hauled off-site for reprocessing = 85,385 cy (incl. lime for dehydration).
- Approx. half of total tailings volume is required to be hauled off-site due to inadequate capacity of repository.

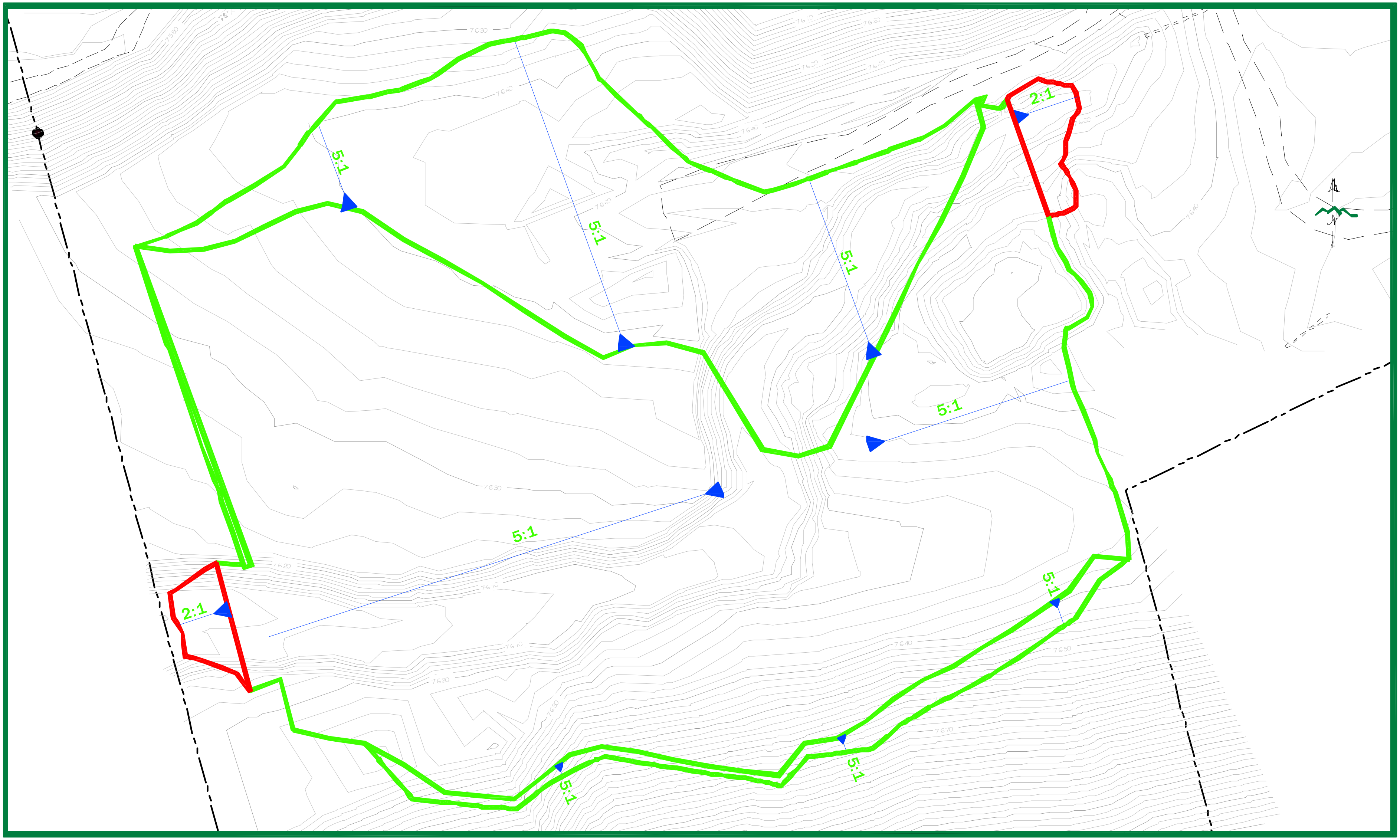
Repository Excavation Plan View

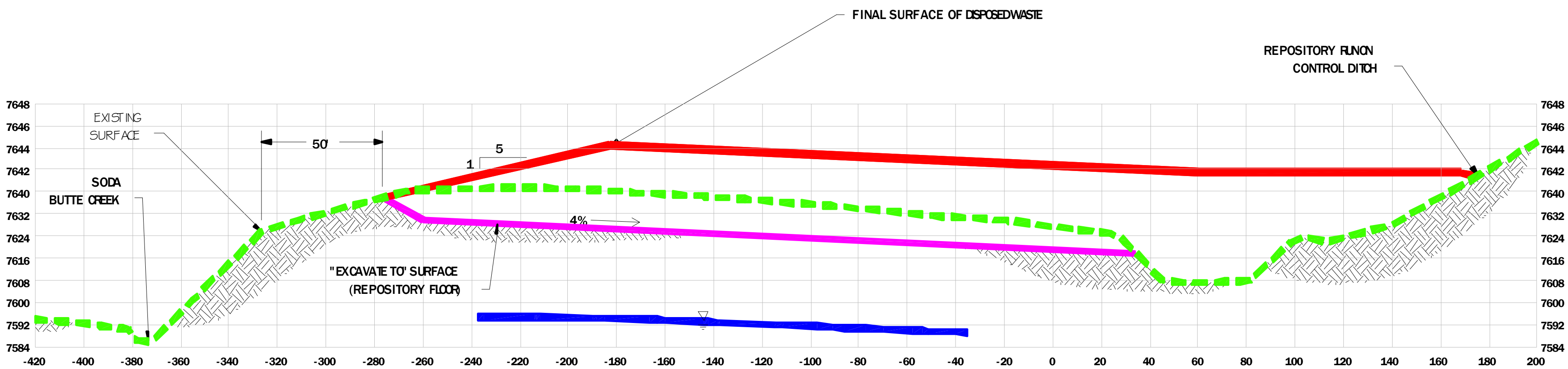


Provide Sufficient Quantity Of Soil For Cap Construction And General Reclamation

- Total quantity of cover soil required for cap and general reclamation = 61,000 cy.
- Existing cover soil salvage volume = 32,500 cy.
- Repository excavation volume = 46,000 cy.
- Excess volume of soil available for interim cover and misc. use = 17,500 cy.

Filled Repository Plan View





TYPICAL REPOSITORY CROSS SECTION

Maintain Vertical Separation From Groundwater

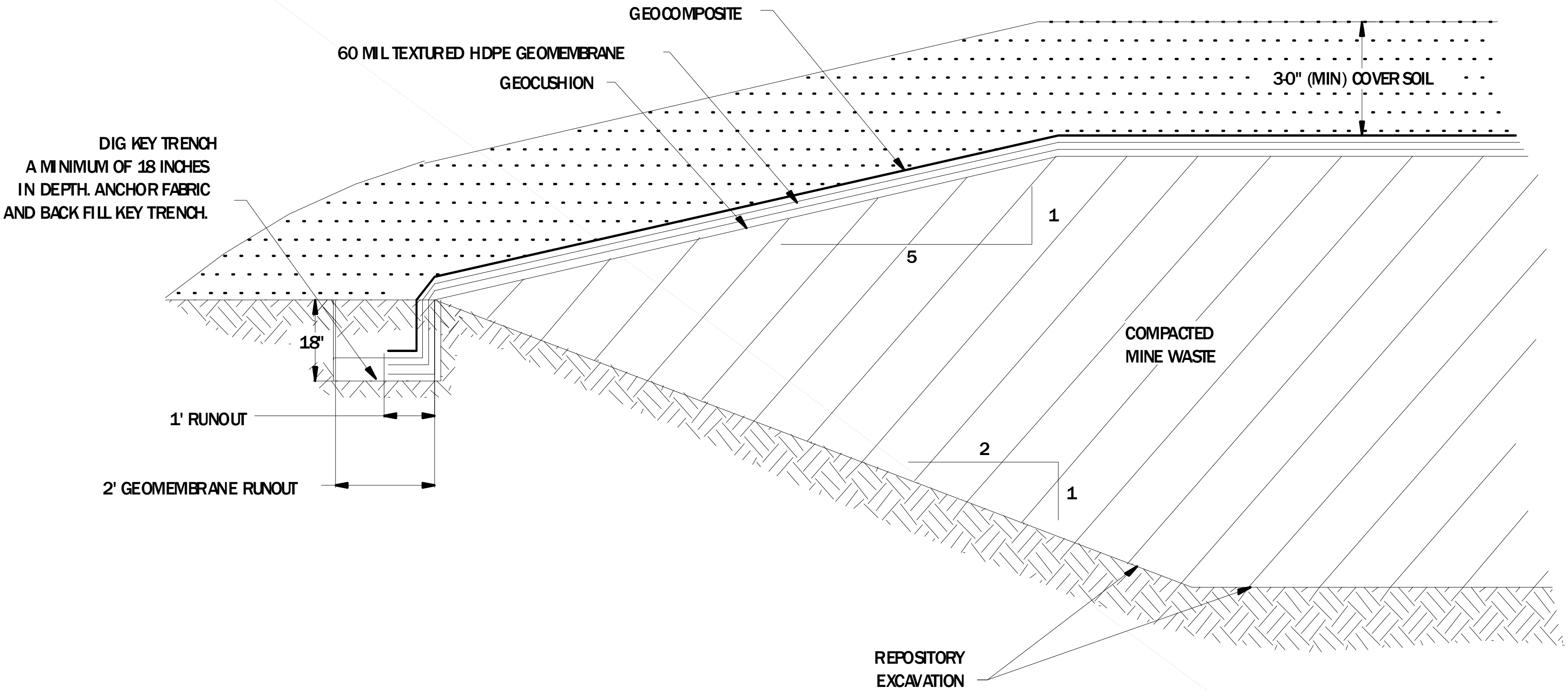
- Bottom of repository to groundwater = 20 feet (nominal).
- Bottom of repository to groundwater = 14 feet (high groundwater conditions).

SPLP Data

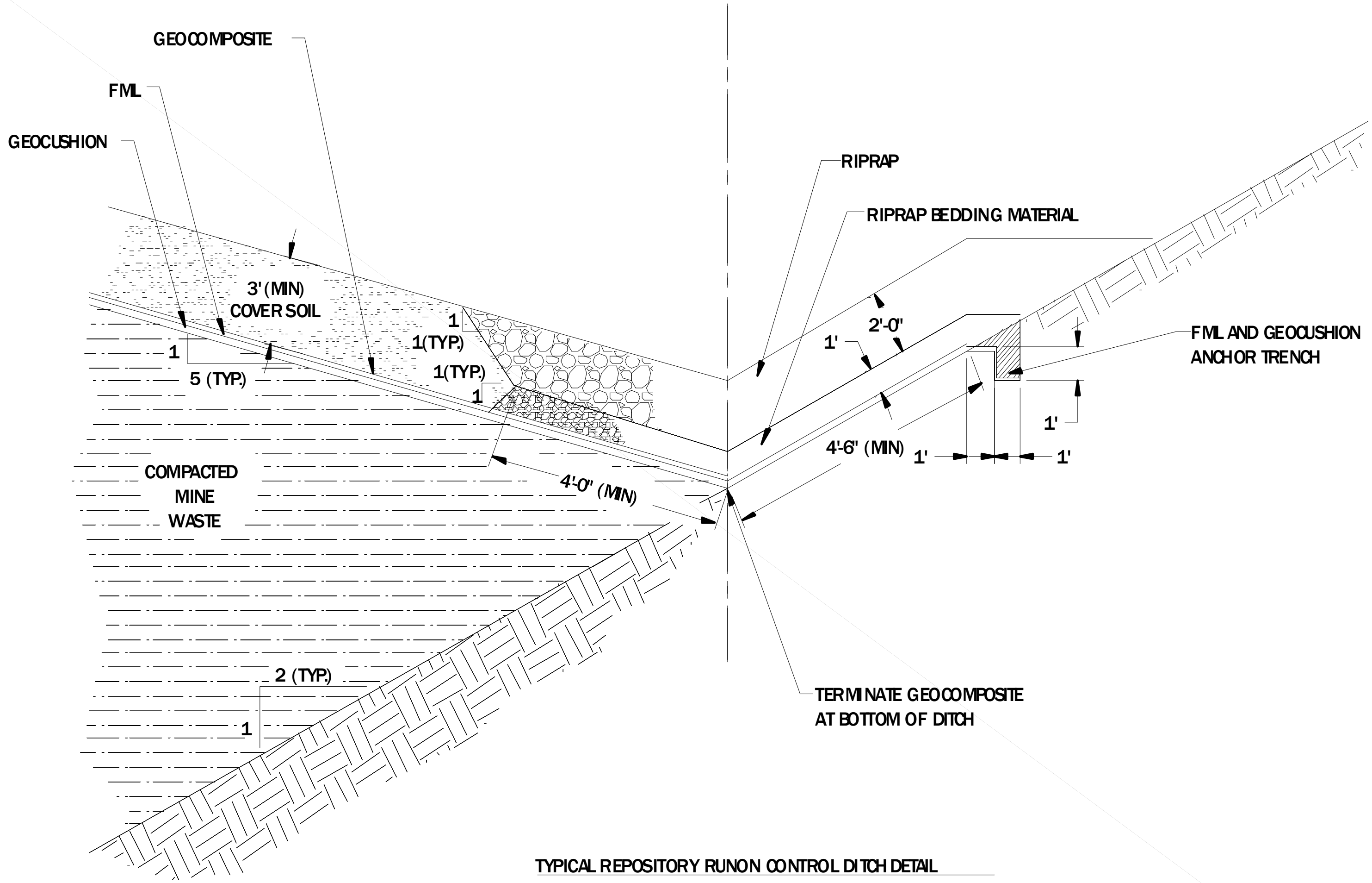
	Al (mg/L)	Cd (mg/L)	Cu (mg/L)	Fe (mg/L)	Mn (mg/L)	Ni (mg/L)	Zn (mg/L)
Tailings (no lime)	0.182	0.091	0.065	24.5	4.29	0.022	0.23
3% QL	0.04	ND	0.086	ND	ND	0.003	ND
5% QL	ND	ND	0.12	ND	ND	0.002	ND
3% LKD	0.39	ND	0.038	0.01	ND	ND	ND
5% LKD	0.43	ND	0.074	ND	ND	0.002	ND

Design Repository Cap and Run-on Controls to Limit Infiltration

- Cap design consists of 6 major components:
  a. Compaction and finish grading to provide positive drainage (subgrade prep.);
  b. Geocushion (provides puncture protection for flexible membrane liner);
  c. 60-mil textured HDPE FML;
  d. Geocomposite (lateral drainage layer);
  e. 3-ft. thick layer of cover soil (vegetated cover component); and
  f. Run-on controls (lined run-on control ditch).



TYPICAL REPOSITORY LAYERING DETAIL



TYPICAL REPOSITORY RUNON CONTROL DITCH DETAIL

Tailings Stabilization Method Design

Tailings Stabilization Design Objectives

- Design system capable of mixing 3 to 5 percent lime materials (by weight) to tailings;
- Minimize the dust associated with working with lime products;
- Design a system that is flexible;
- Design a system that is capable of stabilizing/dehydrating the tailings so they can be transported off site and/or placed and compacted in the repository;

Tailings Stabilization Design Objectives (cont.)

- Design a system with the necessary quality controls; and
- Design a system with the productivity required to complete the project in timely manner.

Lime Amendments

- Hydrated Lime
- Lime Kiln Dust (LKD)
- Quick Lime (Pellets)
- Crushed Lime (3/8 inch minus)

Lime Sources

- Graymont Townsend, Montana (approximately 403 miles)
- Wyoming Lime Producers Frannie, Wyoming (approximately 130 miles)
- Pete Lien & Sons, Inc. Rapid City, South Dakota (approximately 470 miles)

Tailings Stabilization Design

- Add 3 percent lime (by weight) to tailings with moisture content less than 30 percent;
- Add 5 percent lime (by weight) to tailings with moisture content greater than 30 percent;
- Use Nuclear Density Meter to determine moisture content;
- Allow mixture to cure a minimum of 24 hours prior to placing and compacting in the repository;

Tailings Stabilization Design (cont.)

- Excavate tailings materials and place in windrow/stockpile at Tailing Stabilization Area;
- Amend tailings with lime using Allu Stabilization System (ALLU PF Pressure Feeder, ALLU PM Power Mixer, and ALLU DAC Control System); and
- Pursue option of mixing tailings in place using ALLU Stabilization System (to be determined in field).

ALLU PF Pressure Feeder

ALLU PM Power Mixer

ALLU DAC Control System

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Soda Butte and Miller Creek Reconstruction Design

Design Objectives

- Design/develop a stable functioning stream channel.

- Design/develop a stream design that will facilitate development of suitable habitat for fish, macroinvertebrates, and other aquatic life via natural stream process.

Design Considerations

- Use reference reaches to help guide the design components.
- Hydrology modeling using HEC-RAS and RiverCAD.
- Final excavation. This will affect location and profile/grade of the stream channel.
- Incorporate bio-engineering methods using, coir fabric, willows fascines and stakes, woody debris and riparian vegetation.

Soda Butte Creek Reference Reaches

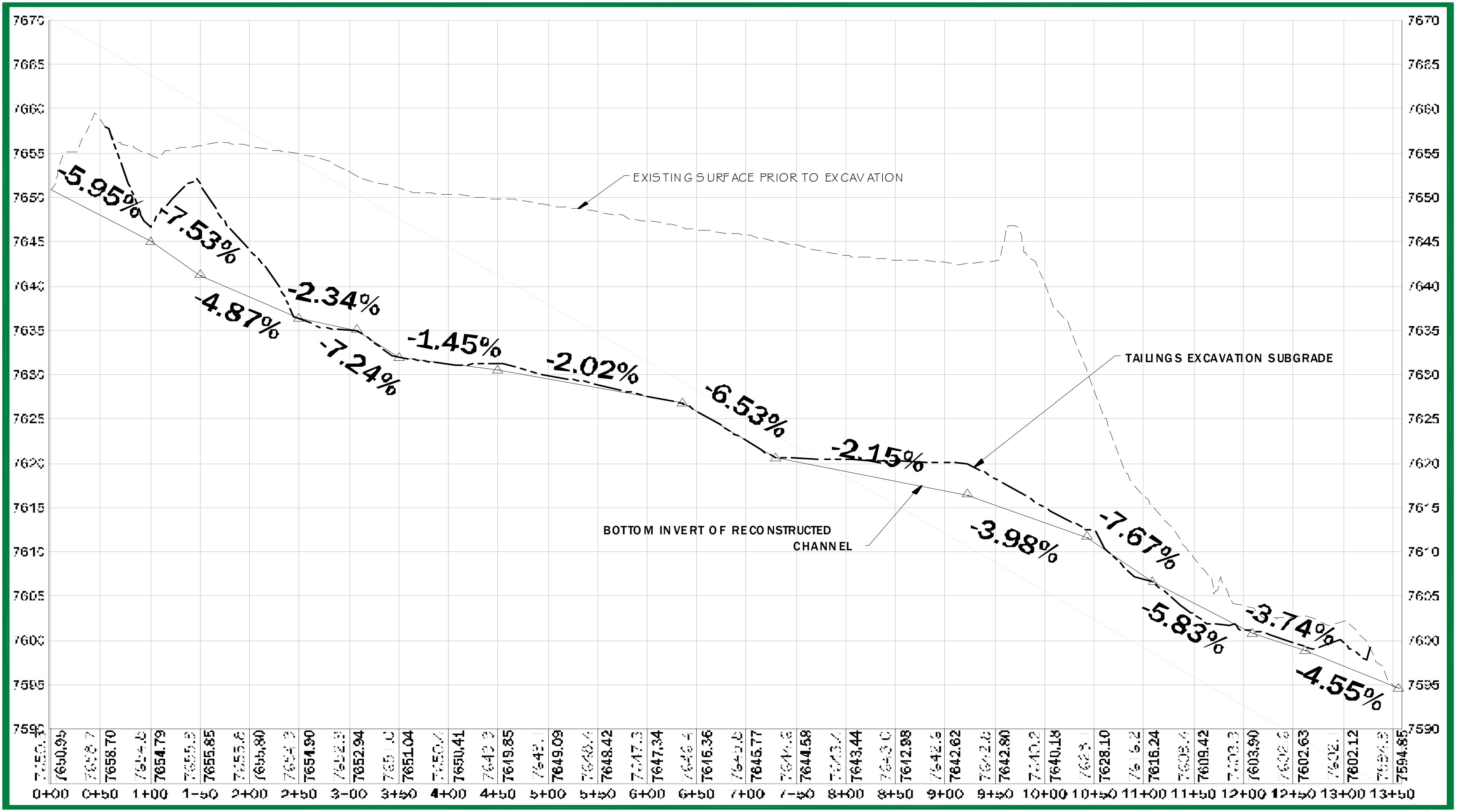
Location	Channel Width (ft)		Channel Gradient (%)	Substrate (inches)	
	Low	High		Coarse	Fines
STR-1	8	15	1.6	18	3
STR-2	10	23.5	5.3	36	3
STR-3	5	18.7	8.1	48	3
STR-4	8	13.4	1.2	6	0.025

Soda Butte Creek (STR-1)

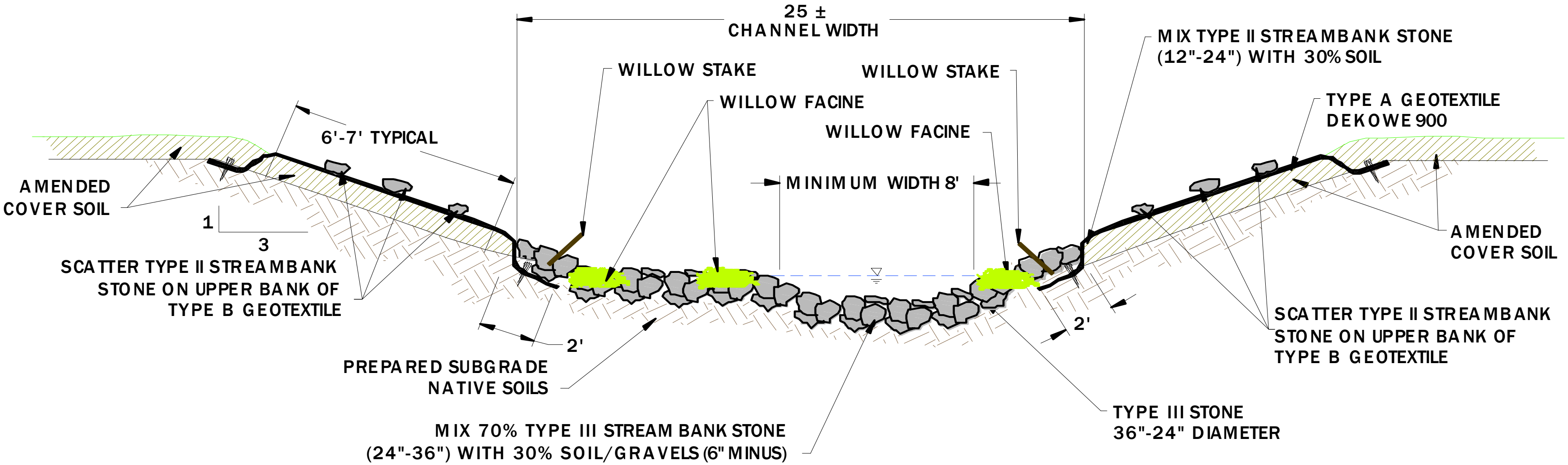
Soda Butte Creek (STR-3)

Soda Butte Creek Alignment

Soda Butte Creek Profile View (STA 0+00 to 13+55)



Conceptual Soda Butte Creek Typical Cross-Section



TYPICAL CROSS SECTION SODA BUTTE CREEK

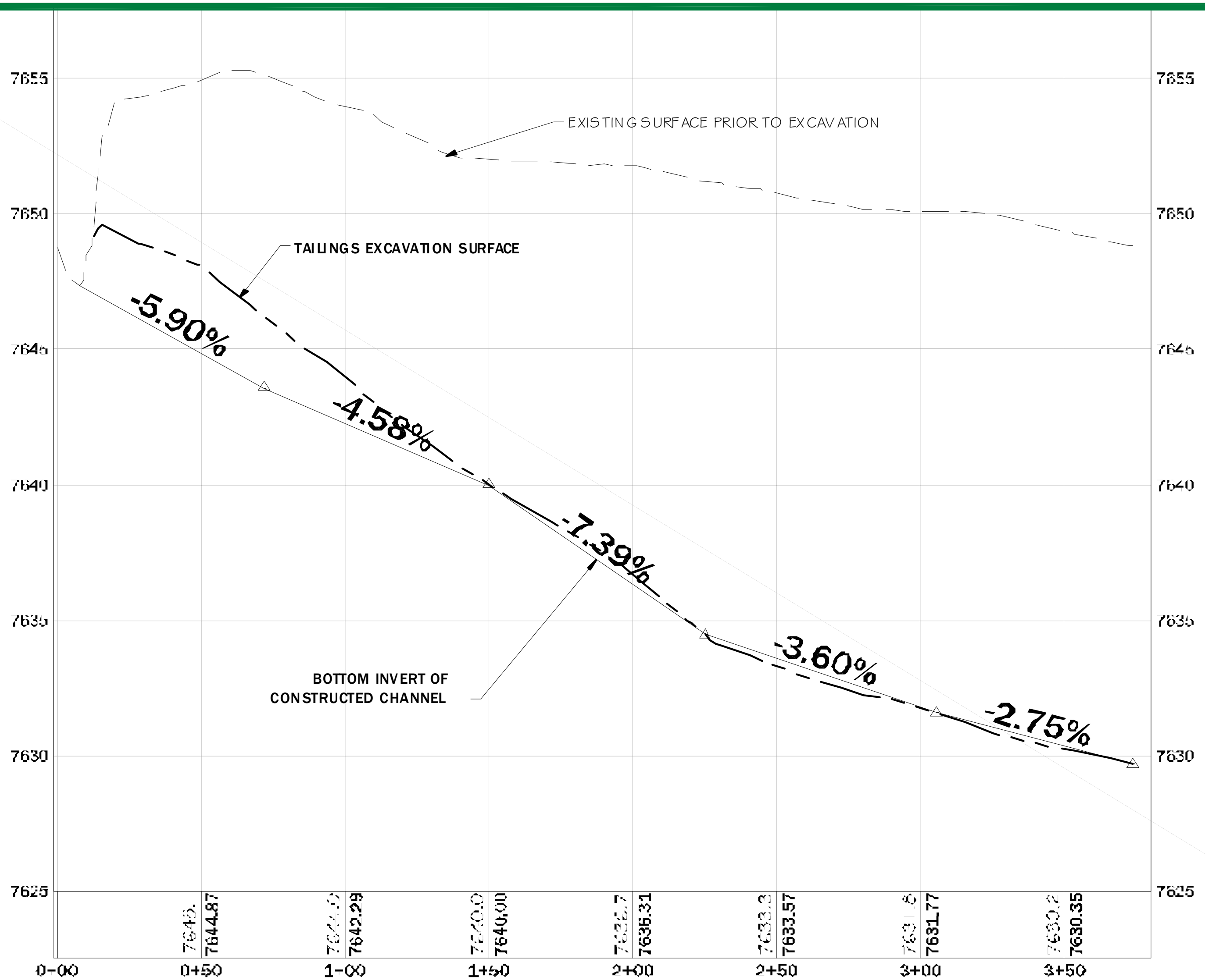
Miller Creek

Miller Creek Reference Reaches

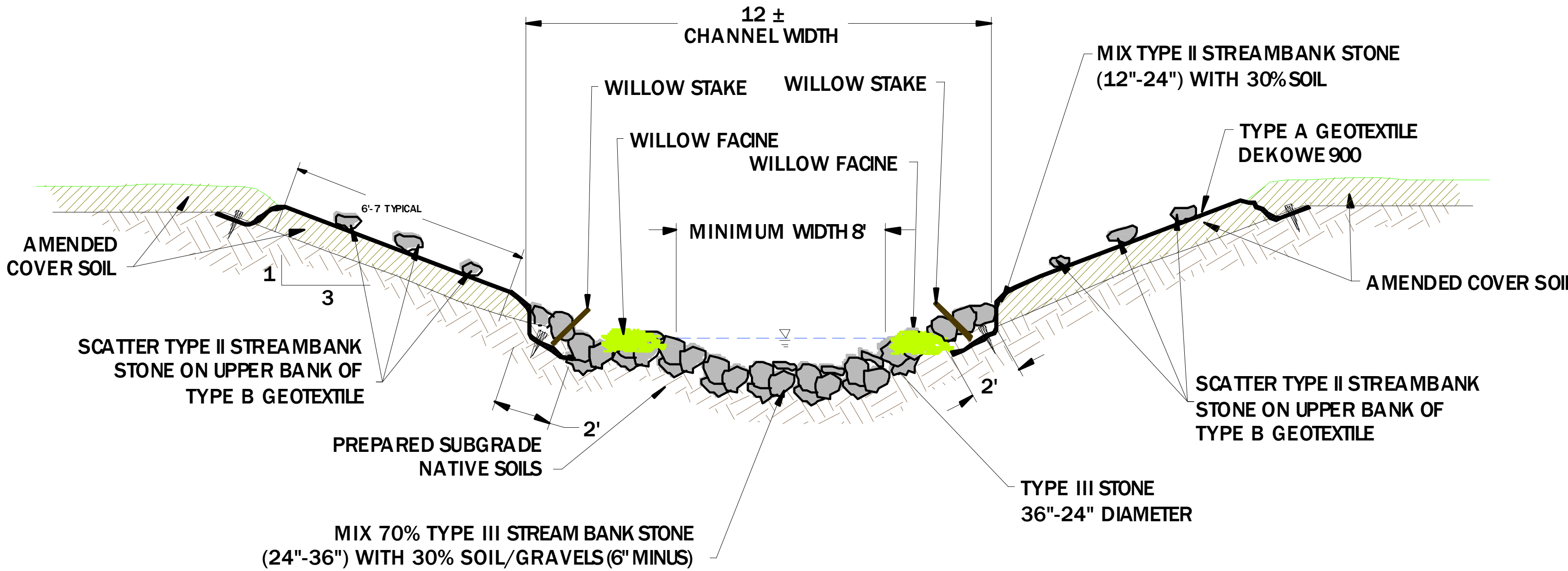
Location	Channel Width (ft)		Channel Gradient (%)	Substrate (inches)	
	Low	High		Coarse	Fines
STR-1	8	17.8	13.3	48 to 36	6
STR-2	9.2	32.7	13.3	48 to 36	6
STR-3	23.7	34.4	13.3	48 to 36	6

Miller Creek (STR-1)

Miller Creek Profile View



Conceptual Miller Creek



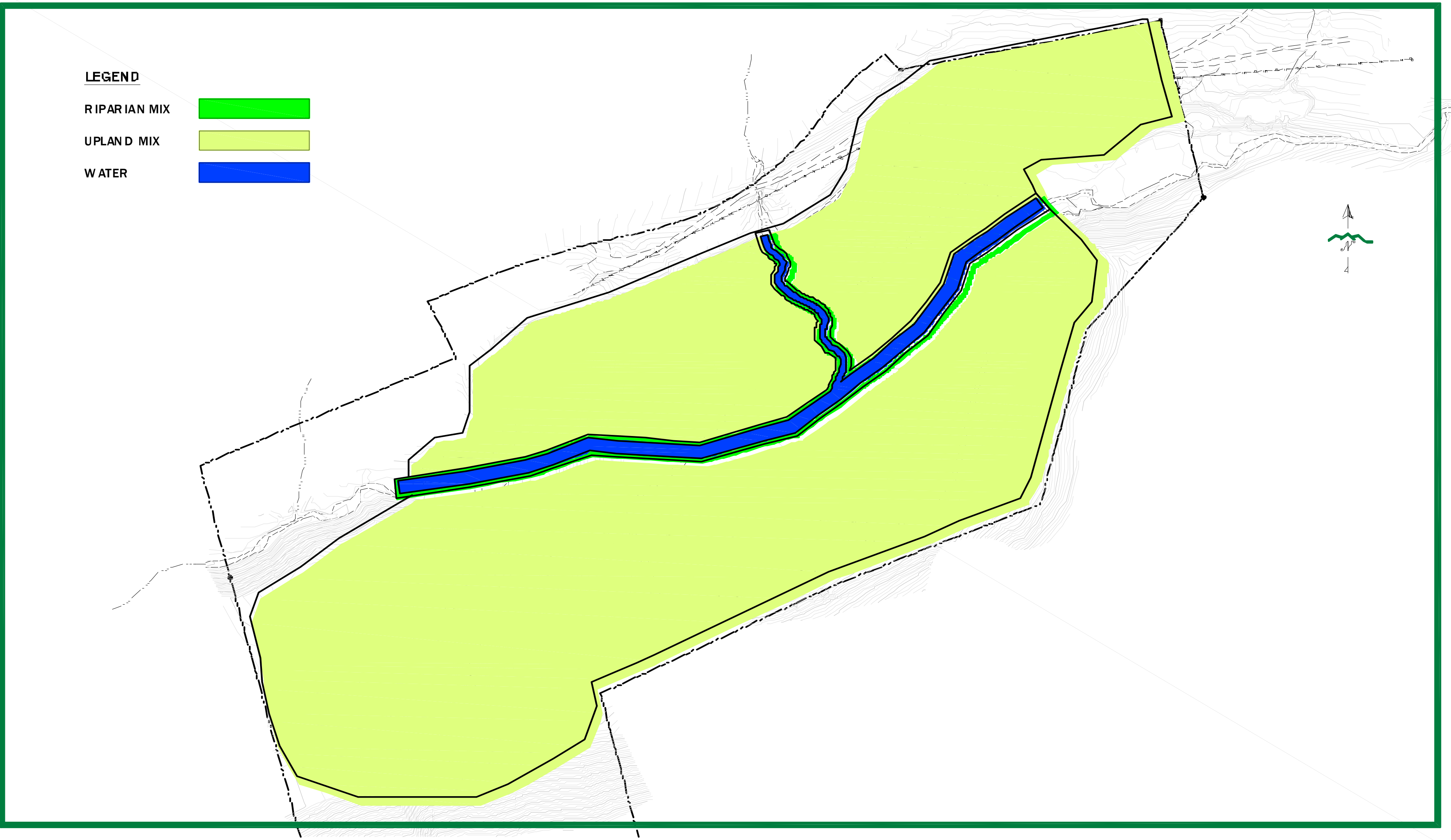
TYPICAL CROSS SECTION MILLER CREEK

Revegetation Design

Design Objectives

- Create a stable, functioning land form through the use of organically amended cover soil and selection of appropriate plant species.
- Cover soil will be amended with compost to approximately 3% by weight to promote and maintain long-term vegetation growth at the site.
- The seed mix design are based on establishing cool-season, native plants that are capable of thriving at high elevations with short growing seasons.

Revegetation Plan View



Upland Grass Seed Mix Design

Species	Common Name	Lbs PLS/acre
Elymus lanceolatus	Streambank Wheatgrass	5.0
Pseudoroegneria spicata (ssp)	Bluebunch Wheatgrass	5.0
Festuca ovine	Sheep Fescue	5.0
Poa alpinum	Alpine Bluegrass	7.0
Bromus marginatus	Mountain Brome	7.0
Phleum alpinum	Alpine Timothy	7.0
	TOTAL lbs PLS/ac	**36.0**

Upland Forb Seed Mix Design

Species	Common Name	Lbs PLS/acre
Forbs		
Aquilegia flavescens	Yellow Columbine	0.5
Linum lewisii	Lewis Blue Flax	0.5
	Forb Total	1.0
Non-native annuals		
Regreen	Sterile wheat	15.0
	Annual Total	15.0
	UPLAND SEED MIX TOTAL	**52.0**

Riparian Seed Mix Design

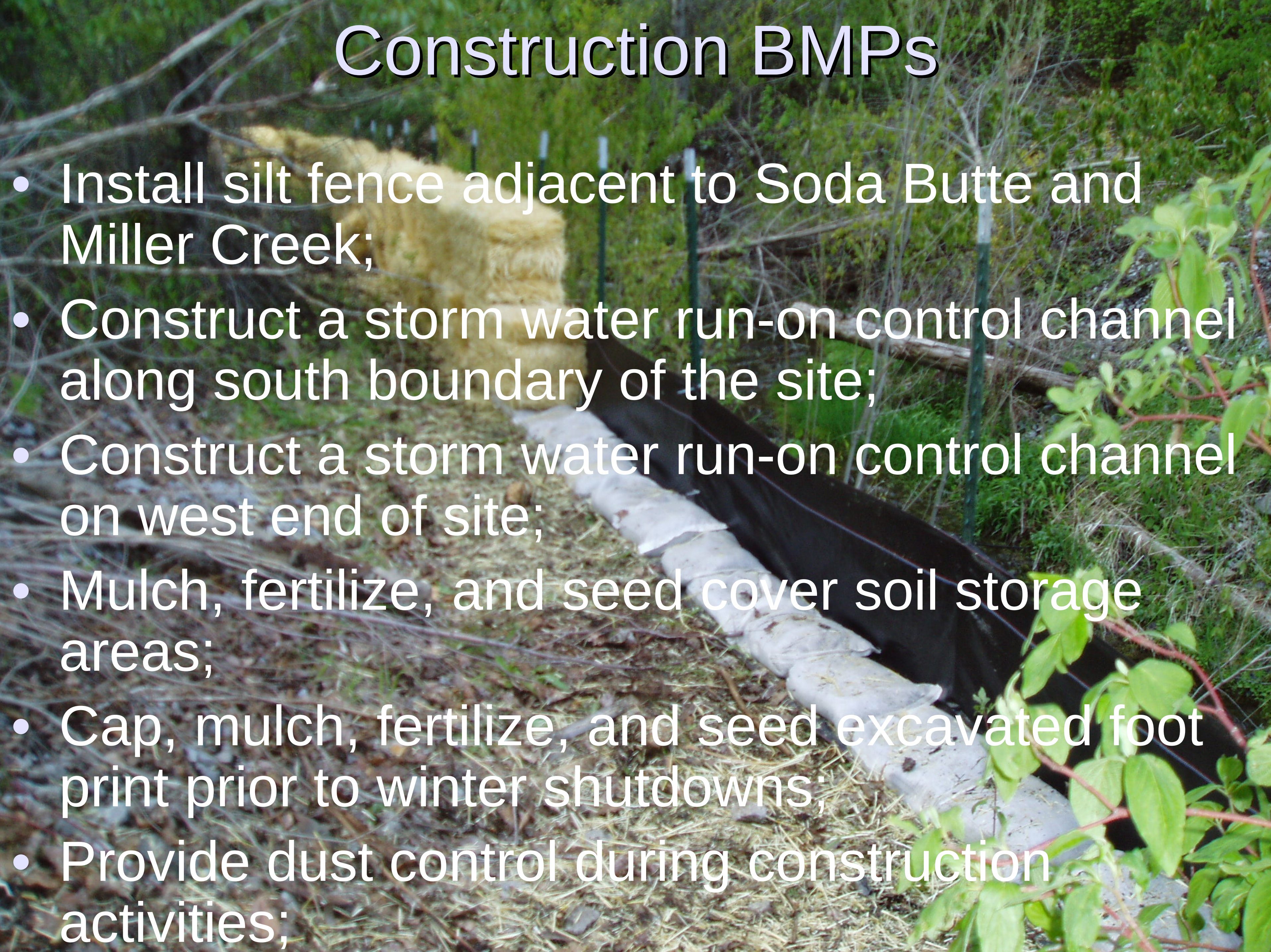
Species	Common Name	Lbs PLS/acre
Grasses		
Deschampsia caespitosa	Tufted Hairgrass	6.0
Phleum alpinum	Alpine Timothy	6.0
Calamagrostis Canadensis	Bluejoint Reedgrass	5.0
Poa alpina	Alpine Bluegrass	5.0
GRASS TOTAL lbs PLS/ac		**22.0**

Riparian Seed Mix Design

Species	Common Name	Lbs PLS/ac
Grass-like		
Carex nebrascensis	Nebraska Sedge	1.0
Juncus arcticus (ssp.) littoralis	Baltic Rush	1.0
	Grass-like Total	**2.0**
Forbs		
Erigeron speciosus	Aspen Daisy	3.0
	Forb Total	**3.0**
RIPARIAN SIX MIX TOTAL lbs PLS/ac		**25.0**

Construction Best Management Practices
(BMPs)

Construction BMPs



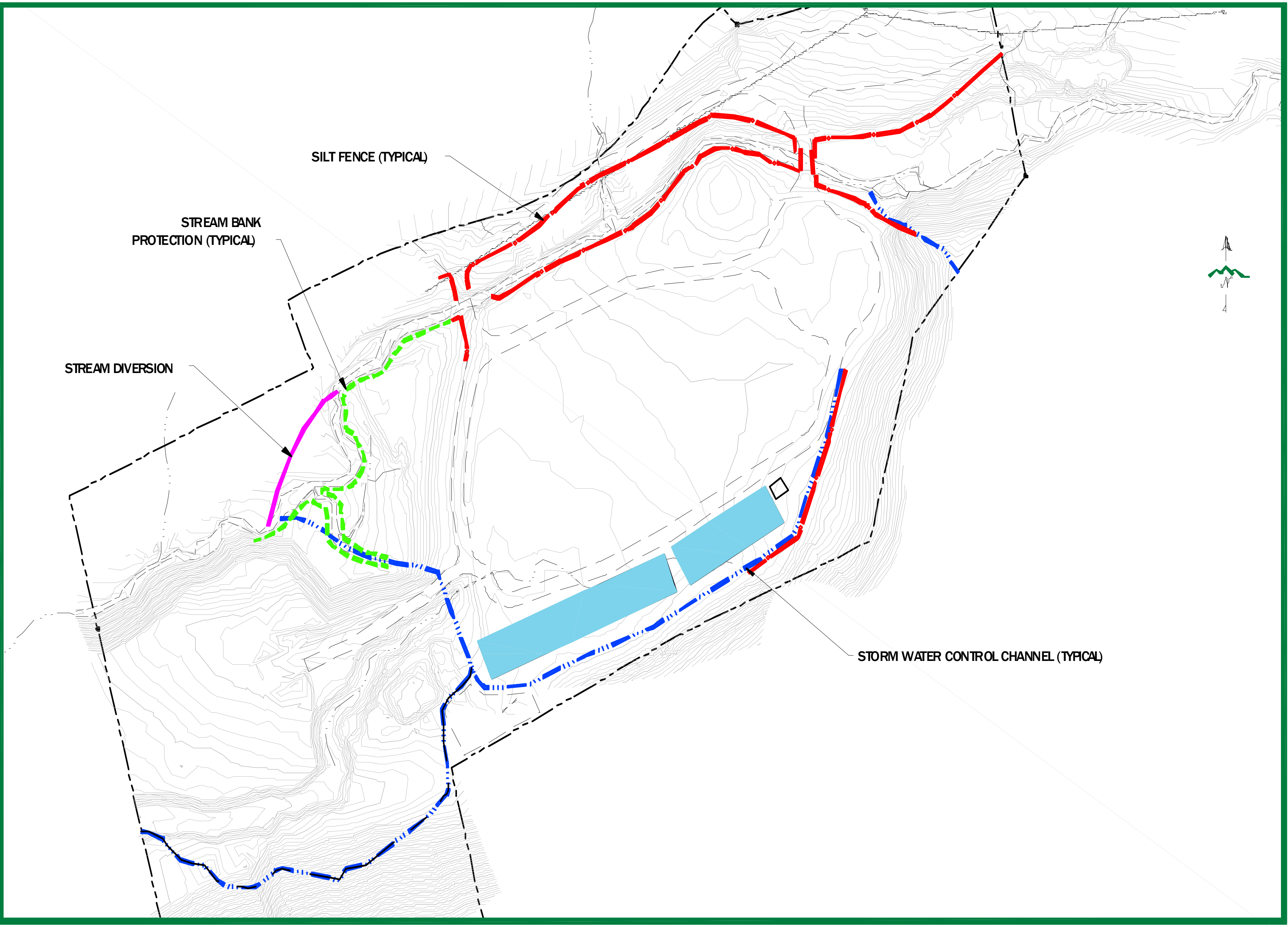
- Install silt fence adjacent to Soda Butte and Miller Creek;
- Construct a storm water run-on control channel along south boundary of the site;
- Construct a storm water run-on control channel on west end of site;
- Mulch, fertilize, and seed cover soil storage areas;
- Cap, mulch, fertilize, and seed excavated foot print prior to winter shutdowns;
- Provide dust control during construction activities;

Construction BMPs (cont.)

- All water pumped during construction will be processed through the water treatment system;
- Construct new Soda Butte Creek and Miller Creek channels before working adjacent to existing channels;
- For first year split flows during spring runoff between existing Soda Butte Creek channel and newly constructed Soda Butte Creek channel;
- Divert Soda Butte Creek into pipe or lined channel to construct new channel for Soda Butte Creek on west end of site;

Construction BMPs (cont.)

- Water accumulated in the repository during spring run off will be processed through water treatment system;
- A vegetation buffer will be left between the repository and Soda Butte Creek;


SILT FENCE (TYPICAL)
STREAM BANK
PROTECTION (TYPICAL)
STREAM DIVERSION
STORM WATER CONTROL CHANNEL (TYPICAL)

Long Term BMPs

- Installation of vegetative caps on repository and over excavation footprint;
- Planting of willows along newly constructed Soda Butte and Miller Creek channels;
- Lined storm water control channel along south side of repository;

Design Conclusions

Design Conclusions

- Maximum Capacity of repository is 198,000 cubic yards;
- The existing, natural slope north of the repository is unstable under the design seismic event;
- Reclamation requires the removal of 283,385 cubic yards of materials (including lime);
- Reclamation of site will require the transportation of 85,385 cubic yards of tailings to an off site repository or disposal facility;

Design Conclusions (cont.)

- Sufficient cover soils can be obtained from on-site;
- Dewatering of the site will require continuous operation for the first 3 years of the project;
- Reclamation of the site will take five construction seasons to complete;

McLaren Abandoned Mine Reclamation Project Schedule

2009 Construction Season:

- Construct highway access into Site;
- Install construction BMPs;
- Construct interior roads;
- Install/Construct Dewatering System;
- Construct Sediment Detention Ponds;
- Clear and grub repository; and
- Cover and revegetate excavated areas.

2010 and 2011 Construction Seasons:

- Complete Construction of interior roads;
- Excavate, stabilize and dispose of tailings;
- Excavate, stockpile cover soil from repository; and
- Cover and revegetate excavated areas.

2012 Construction Season:

- Excavate, stabilize and dispose remaining waste materials;
- Reconstruct Soda Butte and Miller Creek;
  - Partially divert Soda Butte Creek flow into new channel
- Cover and revegetate excavated areas.

2013 Construction Season:

- Excavate, stabilize and dispose remaining waste materials;
- Complete tie-in to Miller Creek;
- Divert full flow of Soda Butte Creek into new channel;
- Backfill existing Soda Butte Creek channel;

2013 Construction Season: (cont.)

- Cap repository;
- Decommission dewatering system;
- Cover and revegetate excavated areas and repository.
- Demobilize all equipment and materials from site.
- Lock the gate and turn the lights off!!!!!


QUESTIONS